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Material Data Sheet	Code	Z85B	Issue 1, Revision 4	
	Designation	HNBR	November 2003	

MATERIAL TYPE: Peroxide cured, Hydrogenated Nitrile Rubber, 76-85 °IRHD.
Medium acrylonitrile content (ACN =36%). ASTM designation = HNBR.
ASTM D2000 line call-out MDH814, A26, B36, EO16, EO36, F14.

APPLICATION: High strength and excellent chemical resistance. Higher operating temperature than standard nitrile. Suitable for use with sour (H²S) crude oil and gas, which may also include lubricating, oil additives and amine corrosion inhibitors. Good resistance to weathering and ozone.

TEMPERATURE RANGE: Maximum operating temperature +180°C (356°F).
Minimum operating temperature -20°C (-4°F).

SHELF LIFE CLASSIFICATIONS: Initial storage = 7 years, extended storage = 3 years.

TYPICAL PHYSICAL PROPERTIES:			
Property	Unit	Test method	Value
Hardness (points)	°IRHD	ASTM D1415 (=ISO 48)	80
Tensile strength	Mpa	ASTM D412 (=ISO 37)	22.0
Elongation at break	%	ASTM D412 (=ISO 37)	265
Compression Set, Method B;			
22 hours at 150°C (302°F)	%	ASTM D395 (=ISO 815)	13.5
Heat Resistance;			
70 hours at 150°C (302°F)		ASTM 573 (=ISO 188)	
Hardness change (points)	°IRHD	ASTM D1415 (=ISO 48)	+1
Tensile strength change	%	ASTM D412 (=ISO 37)	-2.5
Elongation at break change	%	ASTM D412 (=ISO 37)	-21
Low temperature resistance;			
Non brittle after 3 mins at -18°C			Pass

COSHH HEALTH AND SAFETY DATA: No known hazard exists if used in accordance with the temperature range as quoted.

FIRE HAZARD: Ignition temperature >300°C (572°C). Thermal decomposition will generate carbon dioxide, carbon monoxide, hydrocarbons, nitrogen compounds and hydrogen cyanide. In the event of a fire, fire fighters must wear self-contained breathing apparatus and a protective suit.
Extinguish with water, foam, carbon dioxide or dry chemical.

DISPOSAL: Must conform to national, state and/or local regulations. Landfill is recommended. Burning is not recommended, unless conducted by an approved/licensed incineration agency.

SPECIAL NOTE: This information is to the best of our knowledge accurate to the date indicated. However, PPE make no warranty, expressed or implied, that parts manufactured from this material will perform satisfactorily in the customer's application. It is the customer's responsibility to evaluate parts prior to use, especially in applications where their failure may result in injury and/or damage. It should also be noted that all elastomeric parts have a finite life, therefore a regular program of inspection and replacement is strongly recommended.

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